

REMARKS

Claims 14 and 18 are pending. Claims 19 and 20 are hereby canceled without prejudice.

Claims 14 and 18 are currently amended. Support for the claim amendments can be found throughout the specification and original claims - in particular, see FIGS. 12 and 14 and related text.

The following remarks are in response to the Final Office Action mailed December 9, 2009.

Status of Claims

Claims 14 and 18 stand rejected under 35 U.S.C. § 103¹ as being unpatentable over Nakano (U.S. Pat. App. Pub. No. 2004/0046884) in view of Yamamoto (JP 2000-188716).

Claims 19 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nakano in view of Yamamoto and further in view of Ito (JP 2002-199266). Claims 19 and 20 are hereby canceled, rendering these rejections moot.

Claim 14 has been amended, and now requires an imaging apparatus comprising: (a) an image pickup element having an imaging area in which a plurality of light receiving elements are two-dimensionally placed; (b) *an amplifier that amplifies an output of said image pickup element*; (c) a zoom operation unit for a user to operate expansion or reduction of an image; and (d) a controller that controls to drive said image pickup element with a first shutter speed of an electronic shutter and mix a first number of pixel signals in the image pickup element, which is output from the plurality of light receiving elements, *and set said amplifier to a first amplification ratio*, in a case that a first magnification is set by said zoom operation unit, to drive said image pickup element with a second shutter speed of the electronic shutter and mix a second number of pixel signals in the image pickup element, which is output from the plurality of light receiving elements, *and set said amplifier to the*

¹ The Office Action states that the rejection is under 35 U.S.C. § 102(e), but the details of the rejection show that it should be under § 103.

first amplification ratio, in a case that a second magnification, which is larger than the first magnification, is set by said zoom operation unit, wherein the second shutter speed is lower than the first shutter speed and the second number is smaller than the first number, and to drive said image pickup element with the second shutter speed of the electronic shutter and not mix pixel signals in the image pickup element, which is output from the plurality of light receiving elements, and set said amplifier to a second amplification ratio, which is larger than the first amplification ratio, in a case that a third magnification, which is larger than the second magnification, is set by said zoom operation unit.

Claim 18 is a corresponding method claim amended in a similar manner.

Claim Rejections – § 103

Claims 14 and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nakano in view of Yamamoto. These rejections are respectfully traversed, for the following reasons.

First, as explained above, claim 14 has been amended, and now requires that an image of a correct exposure level can be obtained by the above combination of the shutter speed of the electronic shutter and the amplification ratio of the amplifier. Neither Nakano nor Yamamoto teaches this limitation.

As admitted in the Office Action, “Nakano does not disclose first and second shutter speeds as claimed” (even in the previous version of claim 14). In order to cure this deficiency, the Office Action asserts that “Yamamoto discloses an imaging device including control of shutter speeds during image capture” (citing par. [0022] of Yamamoto).

Applicant respectfully disagrees. Par. [0022] of Yamamoto teaches setting an *initial* value of a shutter speed for an “animation photographing mode” based on *initial* shutter speed of a “still picture photographing mode.” There is no mention in par. [0022] of control of shutter speeds *during* image capture.

In any event, even when combined, Nakano and Yamamoto fail to teach an image of a correct exposure level can be obtained by the above combination of the shutter speed of the electronic shutter and the amplification ratio of the amplifier, as required by amended claims

14 and 18.

Moreover, Applicant respectfully submits that the Office Action's asserted motivation for combining Nakano with Yamamoto is improper. At page 3, the Office Action asserts that:

It would be obvious to set a first shutter speed of $X/4$ in the 4 pixel missing mode of Nakano and $X/3$ in the 3 pixel mixing mode of Nakano where X is a shutter speed set for a non-addition mode to ensure that the image signals output by the A/D converter will not be saturated.

Applicant respectfully submits that the above reasoning lacks the "rational underpinning" required to establish a *prima facie* case of obviousness (see MPEP 2142).

Specifically, the image saturation problem in Yamamoto is related to making the initial value of a shutter speed for an animation photographing mode "the same as" the initial shutter speed of a still picture photographing mode. This can cause image saturation, according to Yamamoto, because "the value of each pixel signal becomes twice a pixel signal acquired with all the pixel read systems." But there is no mention or suggestion in Nakano that Nakano's system could have an image saturation problem like Yamamoto's, or that Nakano has any image saturation concerns at all.

Therefore, Applicant respectfully submits that the above-quoted motivation to combine Nakano with Yamamoto is not logically sound, and thus does not satisfy the *KSR*/MPEP 2142 requirement of providing "articulated reasoning with some *rational underpinning*" to establish a *prima facie* case of obviousness.

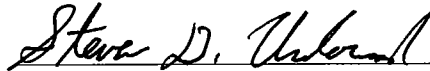
In light of the above, Applicant respectfully submits that amended claims 14 and 18 are patentable over both Nakano and Yamamoto. Accordingly, allowance of the claims is respectfully requested.

The Patent Office is hereby authorized to charge any additional fees which may be required to Deposit Account Number 03-3415.

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COWAN, LIEBOWITZ & LATMAN, P.C.
1133 Avenue of the Americas
New York, New York 10036-6799
Tel. (212) 790-9200

Respectfully submitted,

A handwritten signature in black ink, reading "Steven D. Underwood", written over a horizontal line.

Steven D. Underwood
Reg. No. 47,205
An Attorney of Record